

CLAIMS

What is claimed:

1. A socket for a microelectronic component, comprising:
 - a socket body having a formation for receiving the microelectronic component and including at least a first metal portion;
 - a plurality of contacts on the socket body for making contact with corresponding lands of the microelectronic component;
 - a plurality of terminals on the socket body for connecting to corresponding connections on a carrier substrate; and
 - a plurality of interconnection elements in the socket body, each interconnecting a respective contact with a respective terminal, at least a first set of the interconnection elements all being electrically connected to the first metal portion.
2. The socket of claim 1, further comprising a protrusion on each interconnection element, the interconnection element being inserted into an opening in the socket body until the protrusion is in contact with the first metal portion.
3. The socket of claim 2, further comprising a stop component on the interconnection element to limit how far the interconnection element is inserted into the opening and to ensure that the protrusion is in line with the metal portion.

4. The socket of claim 1, wherein the first metal portion is a metal power portion, the base further having a ground metal portion and a dielectric portion, the first set of interconnection elements being a power set electrically connected to the metal power portion, a ground set of the interconnection elements all being electrically connected to the ground metal portion, and a signal set of the interconnection elements each being electrically disconnected from both the power metal portion and the ground metal portion.

5. The socket of claim 4, wherein the power metal portion is at a different elevation than the ground metal portion, at least some of the interconnection elements each being inserted into a respective opening in the socket body and a protrusion on the respective body, the protrusions of the power set being in contact with the power metal portion and the protrusions of the ground set being in contact with the ground metal portion.

6. The socket of claim 5, further comprising a stop component on each interconnection element to limit how far the respective interconnection element is inserted into a respective opening, the protrusion of each interconnection element of the power set being at a first distance from the stop component and the protrusion of each interconnection element of the ground set being at a second distance, different to the first distance, from the stop component.

7. The socket of claim 6, wherein protrusions on the interconnection elements of the signal set contact the dielectric portion.

8. The socket of claim 1, further comprising a plurality of spring components on the interconnection element, each contact being on a respective spring component.

9. The socket of claim 7, further comprising a plurality of solder balls on the interconnection element, each terminal being on a respective solder ball.

10. A socket for a microelectronic component, comprising:

a socket body having a horizontal base with upper and lower substantially horizontal sides and including at least a first metal portion, and side walls extending upward from the base, the side walls having inner surfaces jointly defining a recessed formation for receiving the microelectronic component;

a plurality of electrically conductive contacts on the socket body at the upper horizontal side, spaced from one another for making contact with corresponding spaced lands of the microelectronic component;

a plurality of terminals on the socket body at the lower horizontal side, spaced from one another for connecting to corresponding connections on a carrier substrate; and

a plurality of interconnection elements in the socket body, each extending between and interconnecting a respective one of the contacts with a respective one

of the terminals, at least a first set of the interconnection elements all being electrically connected to the same first metal portion.

11. The socket of claim 10, wherein the first metal portion is a metal power portion, the base further having a ground metal portion and a dielectric portion, the first set of interconnection elements being a power set electrically connected to the metal power portion, a ground set of the interconnection elements all being electrically connected to the ground metal portion, and a signal set of the interconnection elements each being electrically disconnected from both the power metal portion and the ground metal portion.

12. The socket of claim 11, wherein the power metal portion is at a different elevation than the ground metal portion, at least some of the interconnection elements each inserted into a respective opening in the base, further comprising a protrusion on the respective interconnection element, the protrusions of the power set being in contact with the power metal portion and the protrusions of the ground set being in contact with the ground metal portion.

13. The socket of claim 12, further comprising a stop component on each interconnection element to limit how far the respective interconnection element is inserted into a respective opening, the protrusion of each interconnection element of the power set being at a first distance from the stop component and the

protrusion of each interconnection element of the ground set being at a second distance, different to the first distance, from the stop component.

14. A socket for a microelectronic component, comprising:

a socket body having a horizontal base with upper and lower substantially horizontal sides and including a metal power portion and a metal ground portion, and side walls extending upward from the base, the side walls having inner surfaces jointly defining a recessed formation for receiving the microelectronic component;

a plurality of electrically conductive contacts on the socket body at the upper horizontal side, spaced from one another for making contact with corresponding spaced lands of the microelectronic component;

a plurality of terminals on the socket body at the lower horizontal side, spaced from one another for connecting to corresponding connections on a carrier substrate; and

a plurality of interconnection elements in the socket body, each extending between and interconnecting a respective one of the contacts with a respective one of the terminals, the interconnection elements including a power set, all being electrically connected to the power portion, a ground set, all being electrically connected to the ground portion, and a signal set, each being electrically disconnected from both the power portion and the ground portion.

15. The socket of claim 14, wherein the power metal portion is at a different elevation than the ground metal portion, at least some of the interconnection elements each inserted into a respective opening in the base, further comprising a protrusion on the respective interconnection element, the protrusions of the power set being in contact with the power metal portion and the protrusions of the ground set being in contact with the ground metal portion, further comprising a stop component on each interconnection element to limit how far the respective interconnection element is inserted into a respective opening, the protrusion of each interconnection element of the power set being at a first distance from the stop component and the protrusion of each interconnection element of the ground set being at a second distance, different to the first distance, from the stop component.

16. The socket of claim 15, wherein protrusions on the interconnection elements of the signal set contact the dielectric portion.